



# **STIC Search Report**

## **Biotech-Chem Library**

**STIC Database Tracking Number: 116201**

**TO: Nita M Minnifield  
Location: REM-3C18  
Art Unit: 1645  
Monday, March 08, 2004**

**Case Serial Number: 09/056019**

**From: Barb O'Bryen  
Location: Biotech-Chem Library  
Remsen E01A69  
Phone: 571-272-2518** *BOB*

**barbara.obryen@uspto.gov**

### **Search Notes**

116201

**From:** Chan, Christina  
**Sent:** Monday, March 08, 2004 8:37 AM  
**To:** Minnifield, Nita; Pak, Michael; STIC-Biotech/ChemLib  
**Subject:** RE: rush sequence search request

Please rush. Thanks Chris

*Chris Chan*

TC 1600 New Hire Training Coordinator and SPE 1644  
(571)-272-0841  
Remsen, 3E89

-----Original Message-----

**From:** Minnifield, Nita  
**Sent:** Sunday, March 07, 2004 10:43 AM  
**To:** Chan, Christina  
**Subject:** rush sequence search request

Christina, please approve, 2 month overdue amdt.

STIC

09/056019

Please do commercial and interference sequence search on SEQ ID NO: 1, 3-5, 7, 9-11, 22-24 (all amino acid sequences).

Please provide a paper copy of results.

Transferred case

Thanks,  
Nita M. Minnifield

Searcher: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Location: \_\_\_\_\_  
Date Picked Up: \_\_\_\_\_  
Date Completed: \_\_\_\_\_  
Searcher Prep/Review: \_\_\_\_\_  
Clerical: \_\_\_\_\_  
Online time: \_\_\_\_\_

TYPE OF SEARCH:  
NA Sequences: \_\_\_\_\_  
AA Sequences: \_\_\_\_\_  
Structures: \_\_\_\_\_  
Bibliographic: \_\_\_\_\_  
Litigation: \_\_\_\_\_  
Full text: \_\_\_\_\_  
Patent Family: \_\_\_\_\_  
Other: \_\_\_\_\_

VENDOR/COST (where applic.)  
STN: \_\_\_\_\_  
DIALOG: \_\_\_\_\_  
Questel/Orbit: \_\_\_\_\_  
DRLink: \_\_\_\_\_  
Lexis/Nexis: \_\_\_\_\_  
Sequence Sys.: \_\_\_\_\_  
WWW/Internet: \_\_\_\_\_  
Other (specify): \_\_\_\_\_

Art Unit 1645  
Office REM-3C01  
Mailbox REM-3C18  
571-272-0860

Searcher: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Location: \_\_\_\_\_  
Date Picked Up: \_\_\_\_\_  
Date Completed: \_\_\_\_\_  
Searcher Prep/Review: \_\_\_\_\_  
Clerical: \_\_\_\_\_  
Online time: \_\_\_\_\_

TYPE OF SEARCH:  
NA Sequences: \_\_\_\_\_  
AA Sequences: \_\_\_\_\_  
Structures: \_\_\_\_\_  
Bibliographic: \_\_\_\_\_  
Litigation: \_\_\_\_\_  
Full text: \_\_\_\_\_  
Patent Family: \_\_\_\_\_  
Other: \_\_\_\_\_

VENDOR/COST (where applic.)  
STN: \_\_\_\_\_  
DIALOG: \_\_\_\_\_  
Questel/Orbit: \_\_\_\_\_  
DRLink: \_\_\_\_\_  
Lexis/Nexis: \_\_\_\_\_  
Sequence Sys.: \_\_\_\_\_  
WWW/Internet: \_\_\_\_\_  
Other (specify): \_\_\_\_\_

01-OCT-2003 (T=EMBLrel. 25, Last annotation update)  
Surface protein pSPC.  
GN  
OS Streptococcus pneumoniae.  
OS Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;  
OS Streptococcus.  
OC NCBI\_TaxID=1313;  
CX [1]  
RN  
RP SEQUENCE FROM N.A.  
RA Rannelli F., Oggioni M.R., Pozzi G.;  
RT "Allelic Variation in the Highly Polymorphic Locus pspC of  
RT Streptococcus pneumoniae.";   
RL Submitted (MAY-1999) to the EMBL/GenBank/DBJ databases.  
CC -!- SUBCELLULAR LOCATION: ATTACHED TO THE CELL WALL PEPTID  
CC AN AMIDE BOND (BY SIMILARITY).  
EMBL; AF154043; AAF73816.2; -.  
DR GO; GO:0005618; C:cell wall; IEA.  
DR GO; GO:0016020; C:membrane; IEA.  
DR InterPro; IPR005877; Gpos\_YsIRK.  
DR InterPro; IPR001899; Gram\_pos\_anchor.  
DR InterPro; IPR007756; RICH.  
DR Pfam; PF00746; Gram\_pos\_anchor; 1.  
DR Pfam; PF05062; RICH; 2.  
DR Pfam; PF04650; YsIRK\_signal; 1.  
DR TIGRFAMS; TIGR01167; LPXTG\_anchor; 1.  
DR TIGRFAMS; TIGR01168; YsIRK\_signal; 1.  
DR PROSITE; PS00847; GRAM\_POS\_ANCHORING; 1.  
DR Cell wall; Peptidoglycan-anchor.  
SQ SEQUENCE 769 AA; 85241 MW; EAFCT000B7C64A933 CRC64;

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Query Match      68.5%; Score 957; DB 2; Length 769;
Best Local Similarity 73.9%; Pred. No. 4e-39;
Matches 204; Conservative 24; Mismatches 38; Indels 10; Gaps 3;
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QY   1 ENEGATVPTSGNRANESQAQGQPKKLSERDKARKEVEEKVKIVGESYAKSTKRRH 60
     Db          |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY   61 TITVALVNELNNIKNEYLINKIVESTSP-SOLOILMMSRSKYDEAVSFPEKDSSSSSSD 119
     Db          |:|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY   96 KKTVDLVNKLQNNINYEYLINKIQISTSYEELQKLMMESQSEVDKAVSFEKDLSSSSG 155
     Db          ::||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY  120 SSTPEASDTAPKNPTEPFGEKVAAEKQVKEAEKAKQKEEDARNPTTYTKTLELEI 179
     Db          ||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY  156 SSTEPEASDTAPKNPTEPLEKKVAAEQKVVEAEKKAKQKEEDHRNPPTYTKTLELEI 215
     Db          ||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY  180 ARSDVEVKAELELVKVKANPREOIKQAEAEVTSKQAEATRLKCKITDREAEAEAK 239
     Db          ||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY  216 AEFDEVKEAELELVKVKAESREKKIKQAEAEVTSKQAEATRLKCKITDRKAEAEAK 275
     Db          ||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY  240 -----RRADAKEQGPKGRAKRGVPGELATPPDKK 269
     Db          :|||||::|::|::|::|::|::|::|::|::|::|::|::|::|
QY  276 LKEAVEKNAATSEOGKPXRRVKRRLGEORATPKDK 311
     Db          :|||||::|::|::|::|::|::|::|::|::|::|::|::|::|
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RESULT 10
Q9KK24
ID Q9KK24 PRELIMINARY; PRT; 769 AA.
AC Q9KK24;
DT 01-OCT-2000 (TtEMBlrel. 15, Created)
DT 01-OCT-2000 (TtEMBlrel. 15, Last sequence update)
DT 01-OCT-2003 (TtEMBlrel. 25, Last annotation update)
DE Surface protein PspC.
GN PspC.
OS Streptococcus pneumoniae.
OC Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;
OC Streptococcus.
OC NCBI_TaxID=1313;
[1]
RN SEQUENCE FROM N.A.
RP Iannelli F., Oggioni M.R., Pozzi G.;
RA "Allelic Variation in the Highly Polymorphic Locus pspC of
RT Streptococcus pneumoniae."
RT

```

```

Submitted (MAY-1999) to the EMBL/GenBank/DBJ databases.
CC -!- SUBCELLULAR LOCATION: ATTACHED TO THE CELL WALL PEPTIDOGLYCAN BY
CC AN AMIDE BOND (BY SIMILARITY).
DR EMBL; AF154034; AAF73804.1; -.
DR GO; GO:0005618; C:cell wall; IEA.
DR GO; GO:0016020; C:membrane; IEA.
DR InterPro; IPR005877; Gpos_YSRK.
DR InterPro; IPR001893; Gram_pos_anchor.
DR InterPro; IPR007756; RICH-.
DR Pfam; PF007746; Gram_pos_anchor; 1.
DR Pfam; PF05062; RICH; 2.
DR Pfam; PF04650; YSRK_signal; 1.
DR TIGRFAMs; TIGR01167; LPXTG_signal; 1.
DR TIGRFAMs; TIGR01168; YSRK_signal; 1.
DR PROSITE; PS50847; GRAM_POS_ANCHORING; 1.
KW Cell wall; Peptidoglycan-anchor.
SQ SEQUENCE 769 AA; 85266 MW; D96DBAB7C2E5EA12 CRC64;

Query Match      68.1%; Score 951; DB 2; Length 769;
Best Local Similarity 73.6%; Pred. No. 7.8e-39;
Matches 203; Conservative 25; Mismatches 38; Indels 10; Gaps 3;

QY 1 ENEGATQVPTSSNRANESQAEQGEQPKLDSERDKARKEVEEVKKIVGSSYAKSTKKRH 60
DB 39 ENEGTTQAPTSSNRGNESQA---EQRRLDLERDKVKEVREYKVKVLYSKSTKSRH 95
QY 61 TIIVALVNEIININNYLANKIVESTSE-SQLQILMMESRKVDYAVSKPKDSSSSSSSD 119
DB 96 KKTVDIVNKLQINNNYLNKIIOSTSTYBELQKLMMESQSEVDKAVSEFPKDLSSSSSG 155
QY 120 SSTKPEASDTAKENKTEPEGEKVAEAKKVEEAKKADQKEDRRNPPIITYKTLEI 179
DB 156 SSTPEASDTAKENKTPTELEKKVAEAKQKVEEAKKADQKEDRYNPPIITYKTLEI 215
QY 180 AESDVVKVKAELVKKVKAPEDEQKIKQAEAEVSKQAEATRLKKIKTDRREABBEAK 239
DB 216 AEDVVKVKAELVKKVKAESDEKKIKQAEAEVSKQAEATRLKKIKTDRKAEBEAK 275
QY 240 -----RRADAKEQGKPKRAKEGVFGEIATPDKKE 269
DB 276 LKEAVEKNAATSBQKPKRRVKRRALGEQATPDKKD 311

RESULT 11
Q33753 PRELIMINARY; PRT; 523 AA.
ID O33753
AC O33753;
DT 01-JAN-1998 (TrEMBLrel. 05, Created)
DT 01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Siga binding protein precursor.
GN SP5A.
GE OS
OC Streptococcus pneumoniae.
OC Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;
OC Streptococcus.
NCBI_TaxID=1313;
RN [1]
RS SEQUENCE FROM N.A.
RC STRAIN=serotype 1;
RC MEDLINE=98010350; PubMed=9350867;
RA Hammar Schmidt S., Talay S.R., Brandtzaeg P., Chhatwal G.S.;
RT "Sp5a, a novel pneumococcal surface protein with specific binding to
RT Immunoglobulin A and secretory component.";
RL Mol. Microbiol. 25; 1113-1124 (1997).
DR EMBL; Y10818; CAA71783.1; -.
DR GO; GO:0016020; C:membrane; IEA.
DR InterPro; IPR002479; CW_binding.
DR InterPro; IPR005877; Gpos_YSRK.
DR InterPro; IPR007756; RICH-.
DR Pfam; PF01473; CW_binding_1; 9.
DR Pfam; PF05062; RICH; 1.
DR Pfam; PF04650; YSRK_signal; 1.
DR TIGRFAMs; TIGR01168; YSRK_signal; 1.

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106 NFALNLKSGRIKTEYLYGLSVLKKSESAELPSKAEPLSKIEKLTAFAEHFKDQT----- 160
118 SDSSTKPEASDTAKPNKPTFEGEKVAEAKKKVEEAERKAKDKQKEEDRRNTPTITYKTLEL 177
161 -----LRFGKVAEAKKKVEEAERKAKDKQKEEDVRYNPTITYKTLEL 202
178 ETAESDVVKKAELVLVKANPRDEOKIKQAIAEVESKOAEATRLKKIKTIDEEAEEE 237
203 ETAESDVVKKAELVLVBKANPNEOKVQAARVESKOAEATRLKKIKTIDEEAEEE 262
238 AKRDAK-----EQGPKGRAGVGPGELATPPKENDAKSSDSSVGEETL 284
263 AKRAEAKLKEAVENKATATSEQCKPKRGKRGALGEPATPPKENDAKSSDSSVGEETL 321
RESULT 13
39KK16 PRELIMINARY; PRT; 681 AA.
AC Q9KK16
AD Q9KK16
01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Surface protein PapC.
SPSC.
Streptococcus pneumoniae.
Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;
Streptococcus.
NCBI_TaxID=1313;
[1]
SEQUENCE FROM N.A.
STRAIN=srf25;
Iannelli F., Oggioni M.R., Pozzi G.;
"Allelic Variation in the Highly Polymorphic Locus papC of
Streptococcus pneumoniae";
Submitted (Mar-1999) to the EMBL/GenBank/DBJ databases.
EMBL; AF154040; AAF73812.1; -.
GO; GO:0016020; C:membrane; IEA.
InterPro; IPR002479; CW_binding.
InterPro; IPR005877; Gpss_YSRK.
InterPro; IPR007756; RICH.
Pfam; PF01473; CW_binding_1; 7.
Pfam; PF05062; RICH; 1.
Pfam; PF04650; YSRK_signal; 1.
TIGRFAMs; TIGR01168; YSRK_signal; 1.
SEQUENCE 681 AA; 76728 MW; 38FE4782653D51A8 CRC64;
Query Match 54.6%; Score 763; DB 2; Length 681;
Best Local Similarity 57.4%; Pred. No. 9.3e-30;
Matches 170; Conservative 35; Mismatches 41; Indels 50; Gaps 5;
QY 1 ENGAGTVFTSSNRANESQAEOGPQLDSDERDKARKEYEYVKIVGSSYAKSTKKRH 60
DB 39 EKSVTVFTSSNRANKSQ-----TEHRAAKQVDVEYIKKL-----QLDERKH 82
QY 61 TTITVALVNELINKYELNKIVESTSESLOQLIMWESRSKYDEVAFKFDKSSSSSSDS 120
DB 83 TQNVGLLTKLGVIKTYHLGLSVSKEKSEAF-LPSEVKAKLDAAFAEFQKDDT----- 133
QY 121 STKPEASDTAKPNKPTFEGEKVAEAKKKVEEAERKAKDKQKEEDRRNTPTITYKTLELA 180
DB 134 -----LPTEPKKVAEAKKKVEEAERKAKDKQKEKDLRNYPNTITYKTLELDIA 180
QY 181 ESDEVVKKAELVLVKANPRDEOKIKQAIAEVESKOAEATRLKKIKTIDEEAESAQR 240
DB 181 ESDEVVKKAELVLVBKANPNEOKVQAARVESKOAEATRLKKIKTIDEEAESAQR 240
QY 241 RADAK-----EQGPKGRAGVGPGELATPPKENDAKSSDSSVGEETL 284
DB 241 RAERAKLKEAVENKATATSEQCKPKRGKRGALGEOATPPKENDAKSSDSSVGEETL 296

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Query Match 81.5%; Score 433; DB 4; Length 453;  
Best Local Similarity 82.1%; Pred. No. 5.3e-33;  
Matches 87; Conservative 15; Mismatches 4; Indels 0; Gaps 0;

RESULT 12  
US-09-286-981B-10

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; ORGANISM: Streptococcus pneumoniae
US-09-286-981B-15

Query Match      66.1%; Score 826.5; DB 4; Length 419;
Best Local Similarity 70.1%; Pred. No. 1.1e-57;
Matches 195; Conservative 26; Mismatches 30; Indels 23; Gaps 7;

QY 1 ENEGTOAATSSNMAKTEHRKAQVVDYIEKMLREIQDRRKHTQNVALNKLKLSAIIKT 60
Db 1 ENEGTOAATSSNMAKTEHRKAQVVDYIEKMLREIQDRRKHTQNVALNKLKLSAIIKT 57
QY 61 KYLRNLNVLKESKDELPEIKAKLDAEPEKFKDTL--KGEKVAAEAKKVE----- 111
Db 58 EY---LNGLKESEAELEPKIKAEGLDAEPEKFKDTLPEPEKKVAAEAKKVEAEKVA 114
QY 112 EAKKAAEDQKEDRRNPTNTYKTLLELEIAEFDVKVKEAELELVKKEAKESRNEGTIKQA 171
Db 115 EAKKAAQKEDRRNPTNTYKTLLELEIAEFDVKVKEAELELVKKEADESRNEGTINQA 174
QY 172 KEKVESKAEATRLNENIKTDKKA-EEEAERKADAKLKEANVATSDQKPKGRKRGVPG 230
Db 175 KAKVSEKAEATRLNENIKTDKKA-EEEAERKADAKLKEANVATSDQKPKGRKRGVPG 228
QY 231 ELATPKKENDAKSSDSSVGEETL 254
Db 229 EQATPKKENDAKSSDSSVGEETL 252

RESULT 14
US-08-714-741-46
; Sequence 46, Application US/08714741
; Patent No. 6500613
; GENERAL INFORMATION:
; APPLICANT: Briles, David E.
; APPLICANT: McDaniel, Larry S.
; APPLICANT: Swiatlo, Edwin
; APPLICANT: Yother, Janet
; APPLICANT: Crain, Marilyn J.
; APPLICANT: Hollingshead, Susan
; APPLICANT: Tart, Rebecca
; APPLICANT: Brooks-Walter, Alexis
; TITLE OF INVENTION: PNEUMOCOCCAL GENES, PORTIONS THEREOF,
; TITLE OF INVENTION: EXPRESSION PRODUCTS THEREFROM, AND USES OF SUCH GENES,
; TITLE OF INVENTION: PORTIONS AND PRODUCTS
; NUMBER OF SEQUENCES: 47
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Curtis, Morris & Safford, P.C.
; STREET: 530 Fifth Avenue
; CITY: New York
; STATE: New York
; COUNTRY: U.S.
; ZIP: 10036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/714,741
; FILING DATE: 16-SEP-1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Frommer Esq., William S.
; REGISTRATION NUMBER: 25,506
; REFERENCE/DOCKET NUMBER: 454312-2460
; TELEPHONE: (212) 840-3333
; TELEFAX: (212) 840-0712
; INFORMATION FOR SEQ ID NO: 46:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 605 amino acids
; TYPE: amino acid
; STRANDEDNESS: single

; TOPOLOGY: linear
; MOLECULE TYPE: amino acid
US-08-714-741-46

Query Match      64.3%; Score 805; DB 4; Length 605;
Best Local Similarity 56.7%; Pred. No. 8.4e-56;
Matches 190; Conservative 11; Mismatches 28; Indels 106; Gaps 5;

QY 15 AKTEHRKAQVVDYIEKMLREIQDRRKHTQNVALNKLKLSAIIKTYLRINVL----- 69
Db 47 AKTEHRKAQVVDYIEKMLREIQDRRKHTQNVALNKLKLSAIIKTYLRINVL----- 106
QY 70 -----EKSDELPEIKAK 84
Db 107 KEELFSKTAELTAPEQFKDTLAKPEKKVAAEAKKVEAELELVKKEAKESRNEGTIKQA 166
QY 85 LDAAEKFKKDTLKEGKVAEAKKVEAEAKKAEQKEDRRNPTNTYKTLLEIAEFD 144
Db 167 LDAAEKFKKDTLKEGKVAEAKKVEAEAKKAEQKEDRRNPTNTYKTLLEIAEFD 226
QY 145 VKVKEAELELVKKEAKES----- 162
Db 227 VKVKEAELELVKKEAKESRNEGTIKQA----- 286
QY 163 -----RNEGTIKQA----- 214
Db 287 VKEEAEXEENEKIKQA----- 344
QY 215 SDQKPKGRKRGVPGELATPKKEN---DAKSSD 246
Db 345 ADEEKIK-QAKAKVSKAEATRLNENIKTDKKA----- 378

RESULT 15
US-08-714-741-40
; Sequence 40, Application US/08714741
; Patent No. 6500613
; GENERAL INFORMATION:
; APPLICANT: Briles, David E.
; APPLICANT: McDaniel, Larry S.
; APPLICANT: Swiatlo, Edwin
; APPLICANT: Yother, Janet
; APPLICANT: Crain, Marilyn J.
; APPLICANT: Hollingshead, Susan
; APPLICANT: Tart, Rebecca
; APPLICANT: Brooks-Walter, Alexis
; TITLE OF INVENTION: PNEUMOCOCCAL GENES, PORTIONS THEREOF,
; TITLE OF INVENTION: EXPRESSION PRODUCTS THEREFROM, AND USES OF SUCH GENES,
; TITLE OF INVENTION: PORTIONS AND PRODUCTS
; NUMBER OF SEQUENCES: 47
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Curtis, Morris & Safford, P.C.
; STREET: 530 Fifth Avenue
; CITY: New York
; STATE: New York
; COUNTRY: U.S.
; ZIP: 10036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/714,741
; FILING DATE: 16-SEP-1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Frommer Esq., William S.
; REGISTRATION NUMBER: 25,506
; REFERENCE/DOCKET NUMBER: 454312-2460
; TELEPHONE: (212) 840-3333
; TELEFAX: (212) 840-0712
```

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; INFORMATION FOR SEQ ID NO: 40:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 864 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: amino acid
; US-08-714-741-40

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Query Match      61.6%; Score 770; DB 4; Length 864;
Best Local Similarity 67.0%; Pred. No. 7.5e-53;
Matches 177; Conservative 18; Mismatches 39; Indels 30; Gaps 5;

Qy 6  TQATSSNMA---KTEHRKAQKVVDYIEKMLREIQIDRRKKTQNVNLIKLSAIKTKY 62
Db 229 TLPSPSLNMANESQTEHRKD-----VDEYIKKMLSEIQIDRRKKTQNVNLIKLSAIKTKY 284

Qy 63 LRELNVLEERS-KDELPESEIKAKLDAAFKPKDITLKPGEKVAEAKKVEEAKKKAEDOK 121
Db 285 LYELSVLKENSKEELTSKTAELTAAPFQKDTLKPGEKVAEAKKVEEAKKKAEDOK 344

Qy 122 EEDRNPTNTYKTELEIAEFQVVKVKAELVYKEEAKESRNEGTVKQAKKVESKKAE 181
Db 345 EEDRNPTNTYKTELEIAESDVVKVKAELVYKEEAKESRNEEKIKQAKKVESKKAE 404

Qy 182 ATRLENKTDKKAEEAKKADAKLKEANVATSDQCKPKGRAKRGVPGELATPDYK--- 238
Db 405 ATRLEKIDTKKAEEAKKAESEKKA-----AEAKQKVDAEEVALEAKIAE 453

Qy 239 -----ENDAKSSDSSVGEETL 254
Db 454 LEVEVQRLKELKEIDSDSEDYL 477

```

Search completed: March 8, 2004, 12:37:48  
Job time : 11.7102 secs



RESULT 12  
US-09-536-784-38  
; Sequence 38, Application US/09536784  
; Patent No. 6573082  
; GENERAL INFORMATION:  
; APPLICANT: Choi et. al.  
; TITLE OF INVENTION: Streptococcus pneumoniae Antigens and Vaccines  
; NUMBER OF SEQUENCES: 452  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Human Genome Sciences, Inc.  
; STREET: 9410 Key West Avenue  
; CITY: Rockville  
; STATE: Maryland  
; COUNTRY: USA  
; ZIP: 20850  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette, 3.50 inch, 1.44Mb storage  
; COMPUTER: HP Vectra 486/33  
; OPERATING SYSTEM: MSDOS version 6.2  
; SOFTWARE: ASCII Text  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/536,784  
; FILING DATE: 30-Oct-1997  
; CLASSIFICATION: <Unknown>  
; PRIORITY APPLICATION DATA:  
; APPLICATION NUMBER: 08/961,083  
; FILING DATE: OCT-30-1997  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Michelle S. Marks  
; REGISTRATION NUMBER: 41,971  
; REFERENCE/DOCKET NUMBER: FB340P3  
; TELEPHONE: (301) 309-8504  
; TELEFAX: (301) 309-8512  
; INFORMATION FOR SEQ ID NO: 38:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 453 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; SEQUENCE DESCRIPTION: SEQ ID NO: 38:  
US-09-536-784-38  
Query Match 30.5%; Score 468; DB 4; Length 453;  
Best Local Similarity 89.6%; Pred. No. 1.7e-35;  
Matches 95; Conservative 8; Mismatches 3; Indels 0; Gaps 0;  
Qy 1 KSGKVAEAEKKVVEAEKKAQKQEDRRNYPTNTYKTLDLIAESDVVKVEAELELYKE 60  
Db 88 KPEKVAEAEKKVVEAEKKAQKQEDRRNYPTNTYKTLDLIAESDVVKVEAELELYKE 147  
Qy 61 EAKEPRDEKIKQAKVSKAEATRLNITDKRKAEEAEAKKA 106  
Db 148 EAKEPRNEEKVQKAEVSKAEATRLNITDKRKAEEAEAKKA 193  
RESULT 13  
US-08-714-741-42  
; Sequence 42, Application US/08714741  
; Patent No. 6500613  
; GENERAL INFORMATION:  
; APPLICANT: Briles, David E.  
; APPLICANT: McDaniel, Larry S.  
; APPLICANT: Swiatlo, Edwin  
; APPLICANT: Yotter, Janet  
; APPLICANT: Crain, Marilyn J.  
; APPLICANT: Hollingshead, Susan  
; APPLICANT: Tart, Rebecca  
; TITLE OF INVENTION: PNEUMOCOCCAL GENES, PORTIONS THEREOF.  
; TITLE OF INVENTION: EXPRESSION PRODUCTS THEREFROM, AND USES OF SUCH GENES,  
; TITLE OF INVENTION: PORTIONS AND PRODUCTS  
; NUMBER OF SEQUENCES: 47  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Curtis, Morris & Safford, P.C.  
; STREET: 530 Fifth Avenue  
; CITY: New York  
; STATE: New York  
; COUNTRY: U.S.  
; ZIP: 10036  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible

NUMBER OF SEQUENCES: 47  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Curtis, Morris & Safford, P.C.  
STREET: 530 Fifth Avenue  
CITY: New York  
STATE: New York  
COUNTRY: U.S.  
ZIP: 10036  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/714,741  
FILING DATE: 16-SEP-1996  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Frommer Esq., William S.  
REGISTRATION NUMBER: 25,506  
REFERENCE/DOCKET NUMBER: 454312-2460  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (212) 840-3333  
TELEFAX: (212) 840-0712  
INFORMATION FOR SEQ ID NO: 42:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 588 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: amino acid  
US-08-714-741-42  
Query Match 90.3%; Score 467; DB 4; Length 588;  
Best Local Similarity 91.5%; Pred. No. 2.8e-35;  
Matches 97; Conservative 3; Mismatches 6; Indels 0; Gaps 0;  
Qy 1 KSGKVAEAEKKVVEAEKKAQKQEDRRNYPTNTYKTLDLIAESDVVKVEAELELYKE 60  
Db 348 KPEKVAEAEKKVVEAEKKAQKQEDRRNYPTNTYKTLDLIAESDVVKVEAELELYKE 407  
Qy 61 EAKEPRDEKIKQAKVSKAEATRLNITDKRKAEEAEAKKA 106  
Db 408 EANESNEEKIKQAEKVESKAEATRLNITDKRKAEEAEAKKA 453  
RESULT 14  
US-08-714-741-40  
; Sequence 40, Application US/08714741  
; Patent No. 6500613  
; GENERAL INFORMATION:  
; APPLICANT: Briles, David E.  
; APPLICANT: McDaniel, Larry S.  
; APPLICANT: Swiatlo, Edwin  
; APPLICANT: Yotter, Janet  
; APPLICANT: Crain, Marilyn J.  
; APPLICANT: Hollingshead, Susan  
; APPLICANT: Tart, Rebecca  
; APPLICANT: Brooks-Walter, Alexis  
; TITLE OF INVENTION: PNEUMOCOCCAL GENES, PORTIONS THEREOF.  
; TITLE OF INVENTION: EXPRESSION PRODUCTS THEREFROM, AND USES OF SUCH GENES,  
; TITLE OF INVENTION: PORTIONS AND PRODUCTS  
; NUMBER OF SEQUENCES: 47  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Curtis, Morris & Safford, P.C.  
; STREET: 530 Fifth Avenue  
; CITY: New York  
; STATE: New York  
; COUNTRY: U.S.  
; ZIP: 10036  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible

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;; OPERATING SYSTEM: PC-DOS/MS-DOS
;; SOFTWARE: PatentIn Release #1.0, Version #1.30
;; CURRENT APPLICATION DATA:
;; APPLICATION NUMBER: US/08/714,741
;; FILING DATE: 16-SEP-1996
;; CLASSIFICATION: 435
;; ATTORNEY/AGENT INFORMATION:
;; NAME: Frommer Esq, William S.
;; REGISTRATION NUMBER: 25,506
;; REFERENCE/DOCKET NUMBER: 454312-2460
;; TELECOMMUNICATION INFORMATION:
;; TELEPHONE: (212) 840-3333
;; TELEFAX: (212) 840-0712
;; INFORMATION FOR SEQ ID NO: 40:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 864 amino acids
;; TYPE: amino acid
;; STRANDEDNESS: single
;; TOPOLOGY: linear
;; MOLECULE TYPE: amino acid
US-08-714-741-40
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Query Match 90.3%; Score 467; DB 4; Length 864;
Best Local Similarity 91.5%; Pred. No. 4.3e-35;
Matches 97; Conservative 3; Mismatches 6; Indels 0; Gaps 0;

Qy 1 KSGKKVAEAEKKVEAEKKAKDQKEDRRNYPNTYKTLDEIAESDVKKVEAELELVKE 60
Db 321 KPEKKVAEAEKKVEAEKKAKDQKEDRRNYPNTYKTLDEIAESDVKKVEAELELVKE 380

Qy 61 EAKSPDEEKKQAKAKVESKKAATRLNKTDRKKAEEAEKKA 106
Db 381 EANSRNEEKIKQAKAKVESKKAATRLNKTDRKKAEEAEKKA 426
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RESULT 15
US-09-286-981B-1
; Sequence 1, Application US/09286981B
; Patent No. 6503511
; GENERAL INFORMATION:
; APPLICANT: Wizemann, Theresa M.
; APPLICANT: Koenig, Scott
; APPLICANT: Johnson, Leslie S
; TITLE OF INVENTION: Derivatives of Choline Binding Proteins for Vaccines
; FILE REFERENCE: 469201-396
; CURRENT APPLICATION NUMBER: US/09/286,981B
; CURRENT FILING DATE: 1999-04-06
; PRIOR APPLICATION NUMBER: US 60/085,743
; PRIOR FILING DATE: 1998-05-15
; NUMBER OF SEQ ID NOS: 38
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 103
; TYPE: PRT
; ORGANISM: Streptococcus pneumoniae
US-09-286-981B-1
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Query Match 89.6%; Score 463; DB 4; Length 103;
Best Local Similarity 92.2%; Pred. No. 8.9e-36;
Matches 95; Conservative 6; Mismatches 2; Indels 0; Gaps 0;

Qy 4 KKVAEAEKKVEAEKKAKDQKEDRRNYPNTYKTLDEIAESDVKKVEAELELVKEAK 63
Db 1 KKVAEAEKKVEAEKKAKDQKEDRRNYPNTYKTLDEIAESDVKKVEAELELVKEAK 60

Qy 64 EPRDEEKKQAKAKVESKKAATRLNKTDRKKAEEAEKKA 106
Db 61 ESRNEEKIKQAKAKVESKKAATRLNKTDRKKAEEAEKKA 103
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Search completed: March 8, 2004, 12:37:49  
CPU time: 5.45962 secs

US-09-286-981B-4  
; Sequence 4, Application US/09286981B  
; Patent No. 6503511  
; GENERAL INFORMATION:  
; APPLICANT: Wisemann, Theresa M.  
; APPLICANT: Koenig, Scott  
; APPLICANT: Johnson, Leslie S  
; TITLE OF INVENTION: Derivatives of Choline Binding Proteins for Vaccines  
; FILE REFERENCE: 469201-396  
; CURRENT APPLICATION NUMBER: US/09/286,981B  
; PRIOR FILING DATE: 1999-04-06  
; PRIOR APPLICATION NUMBER: US 60/085,743  
; PRIOR FILING DATE: 1998-05-15  
; NUMBER OF SEQ ID NOS: 38  
; SOFTWARE: Patent In Ver. 2.1  
; SEQ ID NO 4  
; LENGTH: 251  
; TYPE: PRT  
; ORGANISM: Streptococcus pneumoniae  
US-09-286-981B-4  
  
Query Match 98.1%; Score 515; DB 4; Length 251;  
Best Local Similarity 100.0%; Pred. No. 7.3e-40;  
Matches 105; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 1 PGEKVAEAKKKVEEAKKKAEDQKEDRRNYPNTYKTLLEIAEPDVVKVKAELVKEE 60  
Db 100 PGEKVAEAKKKVEEAKKKAEDQKEDRRNYPNTYKTLLEIAEPDVVKVKAELVKEE 159  
  
QY 61 AKESRNEGTIKQAEKVKESKKAETRLNIKTDKKAEEAAKKA 105  
Db 160 AKESRNEGTIKQAEKVKESKKAETRLNIKTDKKAEEAAKKA 204  
  
RESULT 6  
US-08-714-741-42  
; Sequence 42, Application US/08714741  
; Patent No. 6500613  
; GENERAL INFORMATION:  
; APPLICANT: Briles, David E.  
; APPLICANT: McDaniel, Larry S.  
; APPLICANT: Swiatlo, Edwin  
; APPLICANT: Yother, Janet  
; APPLICANT: Crain, Marilyn J.  
; APPLICANT: Hollingshead, Susan  
; APPLICANT: Tart, Rebecca  
; APPLICANT: Brooks-Walter, Alexis  
; TITLE OF INVENTION: PNEUMOCOCCAL GENES, PORTIONS THEREOF,  
; TITLE OF INVENTION: EXPRESSION PRODUCTS THEREFROM, AND USES OF SUCH GENES,  
; TITLE OF INVENTION: PORTIONS AND PRODUCTS  
; NUMBER OF SEQUENCES: 47  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Curtis, Morris & Safford, P.C.  
; STREET: 530 Fifth Avenue  
; CITY: New York  
; STATE: New York  
; COUNTRY: U.S.  
; ZIP: 10036  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/714,741  
; FILING DATE: 16-SEP-1996  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Frommer Esq., William S.  
; REGISTRATION NUMBER: 25,506  
; REFERENCE/DOCKET NUMBER: 454312-2460  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (212) 840-3333  
; TELEFAX: (212) 840-0712  
; INFORMATION FOR SEQ ID NO: 40:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 864 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: amino acid  
US-08-714-741-40

TELEFAX: (212) 840-0712  
; INFORMATION FOR SEQ ID NO: 42:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 588 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: amino acid  
US-08-714-741-42  
  
Query Match 88.4%; Score 464; DB 4; Length 588;  
Best Local Similarity 90.6%; Pred. No. 8.9e-35;  
Matches 96; Conservative 4; Mismatches 6; Indels 0; Gaps 0;  
  
QY 1 PGEKVAEAKKKVEEAKKKAEDQKEDRRNYPNTYKTLLEIAEPDVVKVKAELVKEE 60  
Db 349 PEKVAEAEKVEEAKKKAEDQKEDRRNYPNTYKTLLEIAEPDVVKVKAELVKEE 408  
  
QY 61 AKESRNEGTIKQAEKVKESKKAETRLNIKTDKKAEEAAKKA 106  
Db 409 ANESRNEEKIKQAEKVKESKKAETRLNIKTDKKAEEAAKKA 454  
  
RESULT 7  
US-08-714-741-40  
; Sequence 40, Application US/08714741  
; Patent No. 6500613  
; GENERAL INFORMATION:  
; APPLICANT: Briles, David E.  
; APPLICANT: McDaniel, Larry S.  
; APPLICANT: Swiatlo, Edwin  
; APPLICANT: Yother, Janet  
; APPLICANT: Crain, Marilyn J.  
; APPLICANT: Hollingshead, Susan  
; APPLICANT: Tart, Rebecca  
; APPLICANT: Brooks-Walter, Alexis  
; TITLE OF INVENTION: PNEUMOCOCCAL GENES, PORTIONS THEREOF,  
; TITLE OF INVENTION: EXPRESSION PRODUCTS THEREFROM, AND USES OF SUCH GENES,  
; TITLE OF INVENTION: PORTIONS AND PRODUCTS  
; NUMBER OF SEQUENCES: 47  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Curtis, Morris & Safford, P.C.  
; STREET: 530 Fifth Avenue  
; CITY: New York  
; STATE: New York  
; COUNTRY: U.S.  
; ZIP: 10036  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/714,741  
; FILING DATE: 16-SEP-1996  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Frommer Esq., William S.  
; REGISTRATION NUMBER: 25,506  
; REFERENCE/DOCKET NUMBER: 454312-2460  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (212) 840-3333  
; TELEFAX: (212) 840-0712  
; INFORMATION FOR SEQ ID NO: 40:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 864 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: amino acid  
US-08-714-741-40  
  
Query Match 88.4%; Score 464; DB 4; Length 864;

Best Local Similarity 90.6%; Pred. No. 1.4e-34; Mismatches 4; Indels 0; Gaps 0;  
Matches 96; Conservative 4;

2y 1 PGKVAEAKKKVEAKKADQKEDRRNYPNTYKTLLEIAEFDVKVKAELVKEE 60  
Db 322 PGKVAEAKKKVEAKKADQKEDRRNYPNTYKTLLEIAEFDVKVKAELVKEE 381  
Qy \*61 AKESNEGTTIKOAKKESKAEATRLNKTDRKKAEEAKRKA 106  
Db 382 ANESNEEKIKOAKKESKAEATRLNKTDRKKAEEAKRKA 427

## RESULT 8

US-09-286-981B-15  
; Sequence 15, Application US/09286981B

; Patent No. 6503511

; GENERAL INFORMATION:

; APPLICANT: Wizemann, Theresa M.

; APPLICANT: Koenig, Scott

; APPLICANT: Johnson, Leslie S

; TITLE OF INVENTION: Derivatives of Choline Binding Proteins for Vaccines

; FILE REFERENCE: 469201-396

; CURRENT APPLICATION NUMBER: US/09/286,981B

; PRIOR FILING DATE: 1999-04-06

; PRIOR APPLICATION NUMBER: US 60/085,743

; PRIOR FILING DATE: 1998-05-15

; NUMBER OF SEQ ID NOS: 38

; SOFTWARE: Patent in Ver. 2.1

; SEQ ID NO 15

; LENGTH: 419

; TYPE: PRT

; ORGANISM: Streptococcus pneumoniae

US-09-286-981B-15

Query Match 86.7%; Score 455; DB 4; Length 419;

Best Local Similarity 90.5%; Pred. No. 4e-34; Indels 0; Gaps 0;

Matches 95; Conservative 3; Mismatches 7; Indels 0; Gaps 0;

Qy 1 PGKVAEAKKKVEAKKADQKEDRRNYPNTYKTLLEIAEFDVKVKAELVKEE 60  
Db 259 PGKVAEAKKKVEAKKADQKEDRRNYPNTYKTLLEIAEFDVKVKAELVKEE 318  
Qy 61 AKESNEGTTIKOAKKESKAEATRLNKTDRKKAEEAKRKA 105  
Db 319 AKESNEEKIKOAKKESKAEATRLNKTDRKKAEEAKRKA 363

## RESULT 9

US-09-286-981B-1

; Sequence 1, Application US/09286981B

; Patent No. 6503511

; GENERAL INFORMATION:

; APPLICANT: Wizemann, Theresa M.

; APPLICANT: Koenig, Scott

; APPLICANT: Johnson, Leslie S

; TITLE OF INVENTION: Derivatives of Choline Binding Proteins for Vaccines

; FILE REFERENCE: 469201-396

; CURRENT APPLICATION NUMBER: US/09/286,981B

; PRIOR FILING DATE: 1999-04-06

; PRIOR APPLICATION NUMBER: US 60/085,743

; PRIOR FILING DATE: 1998-05-15

; NUMBER OF SEQ ID NOS: 38

; SOFTWARE: Patent in Ver. 2.1

; SEQ ID NO 1

; LENGTH: 103

; TYPE: PRT

; ORGANISM: Streptococcus pneumoniae

US-09-286-981B-1

Query Match 86.1%; Score 452; DB 4; Length 103;

Best Local Similarity 91.3%; Pred. No. 1.5e-34;

Matches 94; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

Qy 3 EKVAEAKKKVEAKKADQKEDRRNYPNTYKTLLEIAEFDVKVKAELVKEE 62  
Db 1 KKVAEAKKKVEAKKADQKEDRRNYPNTYKTLLEIAEFDVKVKAELVKEE 60

Qy 63 ESRNEGTTIKOAKKESKAEATRLNKTDRKKAEEAKRKA 105  
Db 61 ESRNEEKIKOAKKESKAEATRLNKTDRKKAEEAKRKA 103

## RESULT 10

US-09-286-981B-19

; Sequence 19, Application US/09286981B

; Patent No. 6503511

; GENERAL INFORMATION:

; APPLICANT: Wizemann, Theresa M.

; APPLICANT: Koenig, Scott

; APPLICANT: Johnson, Leslie S

; TITLE OF INVENTION: Derivatives of Choline Binding Proteins for Vaccines

; FILE REFERENCE: 469201-396

; CURRENT APPLICATION NUMBER: US/09/286,981B

; PRIOR FILING DATE: 1999-04-06

; PRIOR APPLICATION NUMBER: US 60/085,743

; NUMBER OF SEQ ID NOS: 38

; SOFTWARE: Patent in Ver. 2.1

; SEQ ID NO 19

; LENGTH: 114

; TYPE: PRT

; ORGANISM: Streptococcus pneumoniae

US-09-286-981B-19

Query Match 86.1%; Score 452; DB 4; Length 114;

Best Local Similarity 91.3%; Pred. No. 1.7e-34; Indels 0; Gaps 0;

Matches 94; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

Qy 3 EKVAEAKKKVEAKKADQKEDRRNYPNTYKTLLEIAEFDVKVKAELVKEE 62  
Db 1 KKVAEAKKKVEAKKADQKEDRRNYPNTYKTLLEIAEFDVKVKAELVKEE 60  
Qy 63 ESRNEGTTIKOAKKESKAEATRLNKTDRKKAEEAKRKA 105  
Db 61 ESRNEEKIKOAKKESKAEATRLNKTDRKKAEEAKRKA 103

## RESULT 11

US-09-286-981B-7

; Sequence 7, Application US/09286981B

; Patent No. 6503511

; GENERAL INFORMATION:

; APPLICANT: Wizemann, Theresa M.

; APPLICANT: Koenig, Scott

; APPLICANT: Johnson, Leslie S

; TITLE OF INVENTION: Derivatives of Choline Binding Proteins for Vaccines

; FILE REFERENCE: 469201-396

; CURRENT APPLICATION NUMBER: US/09/286,981B

; PRIOR FILING DATE: 1999-04-06

; PRIOR APPLICATION NUMBER: US 60/085,743

; NUMBER OF SEQ ID NOS: 38

; SOFTWARE: Patent in Ver. 2.1

; SEQ ID NO 7

; LENGTH: 428

; TYPE: PRT

; ORGANISM: Streptococcus pneumoniae

US-09-286-981B-7

Query Match 85.5%; Score 449; DB 4; Length 428;

Best Local Similarity 87.6%; Pred. No. 1.4e-33;

Matches 92; Conservative 7; Mismatches 6; Indels 0; Gaps 0;

Qy 1 PGKVAEAKKKVEAKKADQKEDRRNYPNTYKTLLEIAEFDVKVKAELVKEE 60  
Db 267 PGKVAEAKKKVEAKKADQKEDRRNYPNTYKTLLEIAEFDVKVKAELVKEE 326

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: March 8, 2004, 12:22:33 ; Search time 5.14427 seconds  
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Perfect score: 593

Sequence: 1 PSSSLSGKKVAEAEKKVEE.....ABEEAKRKAABEDKVKKEKA 122

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Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:\*

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- 2: /cgn2\_6/prodata/2/iaa/5B COMB.pep.\*
- 3: /cgn2\_6/prodata/2/iaa/6A COMB.pep.\*
- 4: /cgn2\_6/prodata/2/iaa/6B COMB.pep.\*
- 5: /cgn2\_6/prodata/2/iaa/PCUTS COMB.pep.\*
- 6: /cgn2\_6/prodata/2/iaa/backfiles1.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	586	98.8	414	4	US-09-286-981B-16
2	586	98.8	621	3	US-08-847-065-25
3	584	98.5	584	3	US-09-308-022-6
4	574	96.8	414	4	US-09-286-981B-10
5	548	92.4	142	3	US-08-847-065-21
6	542	91.4	419	4	US-09-286-981B-15
7	537	90.6	406	4	US-09-286-981B-18
8	534	90.1	428	4	US-09-286-981B-7
9	532	89.7	446	4	US-09-286-981B-6
10	532	89.7	446	4	US-09-286-981B-9
11	532	89.7	453	3	US-08-961-083-38
12	532	89.7	453	4	US-09-536-784-38
13	526	88.7	413	4	US-09-286-981B-5
14	522	88.0	425	4	US-09-286-981B-11
15	519	87.5	412	4	US-09-286-981B-17
16	510.5	86.1	424	4	US-09-286-981B-14
17	510.5	86.1	425	4	US-09-286-981B-13
18	510.5	86.1	426	4	US-09-286-981B-12
19	509	85.8	114	4	US-09-286-981B-19
20	506	85.3	251	4	US-09-286-981B-4
21	503.5	84.9	431	4	US-09-286-981B-3
22	492	83.0	219	4	US-09-286-981B-8
23	483	81.5	588	4	US-08-714-741-42
24	483	81.5	884	4	US-08-714-741-40
25	463	78.1	103	4	US-09-286-981B-1
26	449.5	75.8	605	4	US-08-714-741-46
27	445	75.0	103	4	US-09-286-981B-38

28	427.5	72.1	1231	4	US-08-714-741-41	Sequence 41, Appl
29	386	65.1	623	4	US-08-714-741-47	Sequence 47, Appl
30	309.5	52.2	131	4	US-08-529-055-56	Sequence 56, Appl
31	309.5	52.2	8991	4	US-08-714-741-32	Sequence 32, Appl
32	291	49.1	110	3	US-08-961-083-102	Sequence 102, Appl
33	291	49.1	110	4	US-09-536-784-102	Sequence 102, Appl
34	202.5	34.1	128	4	US-08-529-055-57	Sequence 57, Appl
35	140	23.6	468	4	US-09-328-352-6321	Sequence 6321, Ap
36	138.5	23.4	1507	3	US-08-329-329-5	Sequence 5, Appl1
37	129.5	21.8	1180	4	US-09-543-681A-6436	Sequence 6436, Ap
38	128	21.6	611	4	US-09-216-393B-81	Sequence 81, Appl
39	127.5	21.5	288	3	US-08-312-949-4	Sequence 4, Appl1
40	127.5	21.5	288	3	US-08-446-201-4	Sequence 4, Appl1
41	127.5	21.5	407	4	US-09-252-991A-29581	Sequence 29581, A
42	127.5	21.5	619	1	US-08-465-746-2	Sequence 2, Appl1
43	127.5	21.5	619	1	US-08-214-164-2	Sequence 2, Appl1
44	127.5	21.5	619	2	US-08-467-852A-3	Sequence 3, Appl1
45	127.5	21.5	619	2	US-08-246-636-2	Sequence 2, Appl1

ALIGNMENTS

RESULT 1  
US-09-286-981B-16  
; Sequence 16, Application US/09286981B  
; Patent No. 6503511  
; GENERAL INFORMATION:  
; APPLICANT: Wizenmann, Theresa M.  
; APPLICANT: Koenig, Scott  
; APPLICANT: Wizenmann, Leslie S  
; TITLE OF INVENTION: Derivatives of Choline Binding Proteins for Vaccines  
; FILE REFERENCE: 469201-396  
; CURRENT APPLICATION NUMBER: US/09/286,981B  
; CURRENT FILING DATE: 1999-04-06  
; PRIOR APPLICATION NUMBER: US 60/085,743  
; PRIOR FILING DATE: 1998-05-15  
; NUMBER OF SEQ ID NOS: 38  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 16  
; LENGTH: 414  
; TYPE: PRT  
; ORGANISM: Streptococcus pneumoniae  
US-09-286-981B-16

Query Match	98.8%	Score 586	DB 4	Length 414
Best Local Similarity	99.2%	Pred. No. 6.2e-46		
Matches 121	Conservative 0	Mismatches 1	Indels 0	Gaps 0
Qy	1	PSSSLSGKKVAEAEKKVEAEKKAKDKKEEDRRNYPTNTYKTLDLEIAESDVKKAEAL	60	
Db	256	PSSSLSGKKVAEAEKKVEAEKKAKDKKEEDRRNYPTNTYKTLDLEIAESDVKKAEAL	315	
Qy	61	ELVKEAEKPRDEKIKOAKVSKAEATLENIKTDKKAEEAKKAABEDKVKKEK	120	
Db	316	ELVKEAEKPRDEKIKOAKVSKAEATLENIKTDKKAEEAKKAABEDKVKKEK	375	
Qy	121	RA 122		
Db	376	PA 377		

RESULT 2  
US-08-847-065-25  
; Sequence 25, Application US/08847065  
; Patent No. 6245335  
; GENERAL INFORMATION:  
; APPLICANT: Masure, H. Robert  
; APPLICANT: Rosenow, George I.  
; APPLICANT: Tuganow, Elaine  
; APPLICANT: Wizenmann, Theresa M.  
; TITLE OF INVENTION: CHOLINE BINDING PROTEINS FOR  
; TITLE OF INVENTION: ANTI-PNEUMOCOCCAL VACCINES